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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,374	10/30/2000	Kent D. Chapman	4380.000400	2238
23720	7590	08/05/2005	EXAMINER	
WILLIAMS, MORGAN & AMERSON, P.C. 10333 RICHMOND, SUITE 1100 HOUSTON, TX 77042			CLARDY, S	
			ART UNIT	PAPER NUMBER
			1617	

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/702,374	CHAPMAN ET AL.	
	Examiner	Art Unit	
	S. Mark Clardy	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17,20-50 and 59-86 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17,20-25,59-61,64-72 and 83-86 is/are rejected.
- 7) ☒ Claim(s) 26-50,62,63 and 73-82 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/10/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-17, 20-50, 59-86 are pending in this application in which a Request for Continued Examination has been filed. This application claims benefit of US Provisional Application 60/162,178, filed October 28, 1999.

Applicants' claims are drawn to compositions (claims 1-17, 20-25, 59-61, 64-72, and 83-86), a kit (claim 26), and methods of delaying plant senescence (claims 27-50, 62, 63, 73-82).

The compositions comprise:

- A) N-acylethanolamine (NAE)): [C₈₋₂₀ alkyl] -CO-NH-EtOH
- B) a plant hormone: auxin (AUX), gibberellin (GB), or cytokinin (CK)
- C) a horticulturally acceptable carrier.

The N-acylethanolamines have been designated throughout the specification using an "NAEx:y" notation which is explained on page 10 of the specification.

Other composition components include:

nutrient materials	(claims 10-11: lipid, carbohydrate ¹ , or amino acid)
surfactant ²	
buffer	(see list in claim 15)
osmoregulants ³	
biocidal agents	(claim 20: antifungal, bacteriostatic, bactericidal ⁴ agents)
(soy) lecithin	(claims 23, 61)
alcohol	(claims 68-69; e.g., isopropanol)

Preferred NAEs appear to be N-lauroylethanolamine and N-myrisoylethanolamine (claim 23).

The methods of delaying senescence make use of either the compositions as outlined above, or the NAE component alone (see for example claim 27).

It appears that a comma is missing in claim 11: " , glucose sorbitol, ...".

¹ Claim 11: lactose, dextrose, fructose, sucrose, glucose, sorbitol, mannitol, inositol

² Claim 12: **polyEO sorbitan monolaurate**, monopalmitate monostearate, EO alkyl phenols, hydrogenated oil

³ Claim 17: a salt, carbohydrate, polyol, polyEO glycol

⁴ Claim 21: 8-hydroxyquinoline, dichloroisocyanurate, 1,3-dichloro5,5-dimethylhydantoin

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The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. Much of the specification is an extensive biotechnological disclosure (sequences, etc.), which is now irrelevant for the claimed invention. It may be useful to "debulk" the specification, deleting the irrelevant biotech sections.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17, 20-25, 59-61, 64-72, and 83-86, are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambie et al (US 6,200,586).

Lambie et al discloses biocidal and agrochemical suspensions comprising active agents such as plant hormones, auxins, gibberellins (col 1, lines 35-40), nutrients (col 5, lines 40-45), as well as biocides (col 5, lines 51-57), and surfactants such as anionic lecithin (col 3, lines 25-33) or nonionic C₁₀₋₂₂ alkanolamide of a mono (or di-) lower alkanolamine (lines 46-49), or ethoxylated alcohols, alkylphenols, or sorbitan esters (lines 50-54). Encapsulants include sugars such as dextrose, galactose, or amylase (col 7, lines 34-43). Additional components include biocides, preservatives, buffers, and antifreezes (col 8, lines 40-43). Lambie et al does not disclose the method claimed herein. Determination of specific components within the generic disclosure of Lambie et al, and determination of appropriate concentrations is seen as being within the skill level of the ordinary artisan, absent data demonstrating unexpected results or criticality.

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Applicants' previous discussion concerning the amine vs. amide nomenclature of the NAE component is noted, as is the apparent discrepancy between using the term "acyl-ethanolamine" to name the structure $R\text{-CONH-CH}_2\text{CH}_2\text{OH}$ as shown in the specification (p. 6), which clearly has an amide linkage (in **bold**). As in much of organic chemistry, there are many ways to name a chemical; in this case, either N-acylethanolamine ($\text{RCO - NHCH}_2\text{CH}_2\text{OH}$), or alkyl ethanolamide ($R\text{- CONHCH}_2\text{CH}_2\text{OH}$). Thus the fatty alkanolamide of the mono lower alkanolamine of Lambie et al (see Example 1, coconut monoethanolamide) is seen as being the same as the acylethanolamines herein.

Claims 26-50, 62, 63, 73-82 (dependent kit and method claims) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

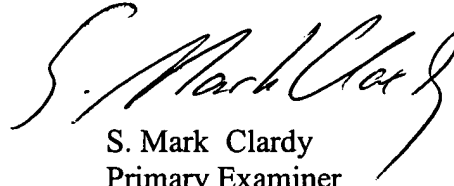
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Mark Clardy whose telephone number is 571-272-0611. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreenivasan Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "S. Mark Clardy". The signature is fluid and cursive, with a large, sweeping "S" at the beginning and a long, horizontal stroke extending to the right.

S. Mark Clardy
Primary Examiner
Art Unit 1617

July 27, 2005